

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

ROBERT BOSCH, LLC.,)	
)	
Plaintiff,)	
)	
v.)	Civ. No. 08-542-SLR
)	
PYLON MANUFACTURING CORP.,)	
)	
Defendant.)	

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MEMORANDUM OPINION

Dated: March 30, 2010
Wilmington, Delaware


ROBINSON, District Judge

I. INTRODUCTION

Plaintiff Robert Bosch LLC ("Bosch LLC") is the owner, by way of assignment from non-party parent Robert Bosch GmbH ("Bosch GmbH"), of U.S. Patent Nos. 6,292,974 ("the '974 patent"), 6,675,434 ("the '434 patent"), 6,944,905 ("the '905 patent") and 6,978,512 ("the '512 patent") (collectively, "the Bosch patents"). The Bosch patents are directed to improvements over conventional bracketed windshield wiper blades. In this patent infringement action,¹ Bosch LLC asserts that defendant Pylon Manufacturing Corp. ("Pylon") has infringed the Bosch patents through the manufacture and sale of various wiper blade products that embody the patented inventions. (D.I. 1) In its answer to Bosch LLC's complaint, Pylon asserts various affirmative defenses and counterclaims including, inter alia, the noninfringement and invalidity of the Bosch patents. (D.I. 56) The answer also contains allegations that Bosch LLC has infringed Pylon's U.S. Patent No. 6,640,380 ("the '380 patent"). (*Id.*)

Both sides have proffered meanings for the disputed claim terms and move for summary judgment. Bosch moves for summary judgment of: (1) infringement of the '974 patent; (2) noninfringement of the '380 patent; and (3) no inequitable conduct and no invalidity for derivation with respect to the '974, '905, and '434 patents. (D.I. 169; D.I. 171; D.I. 173) Pylon moves for summary judgment of noninfringement with respect to the Bosch patents, as well as that the '974 and '512 patents are invalid as anticipated or obvious. (D.I. 177) Bosch also moves concurrently to strike the report of Pylon's expert, Franz Buechele ("Buechele"). (D.I. 191) The court has jurisdiction pursuant to

¹Bosch LLC's false advertising claims against Pylon have been dismissed. (D.I. 91)

28 U.S.C. § 1338. For the reasons that follow, the court grants in part and denies in part the motions.

II. BACKGROUND

A. The Parties and the Technology at Issue

Bosch LLC is a limited liability company formed under the laws of the State of Delaware. (D.I. 61 at ¶ 2) Bosch LLC engages in a broad spectrum of business, including the manufacture and distribution of high-quality automotive technology. Pylon is a Delaware corporation with a principal place of business in Deerfield Beach, Florida. (D.I. 56, Counterclaims at ¶ 1) Pylon specializes in the design, manufacture and marketing of wiper blades.

Conventional bracketed wiper blades derive their name from the multiple levels of brackets, or “yokes,” that create numerous pressure points along the wiping element. These models were plagued by a streaking problem - one more pronounced in vehicles with a curved windshield - associated with a failure of the wiper blade superstructure to evenly distribute the pressure applied by the wiper arm. (D.I. 176, ex. 3 at 23:11-20) Recesses in the superstructure, which frequently became clogged by debris, ice and snow, further exacerbated the uneven distribution of pressure by exposing the wiper blade to increased rigidity. (*Id.* at 24:15-22)

Beam (bracketless) wiper blades substitute the support superstructure of the conventional wiper blade with a spring elastic support element. (D.I. 176, ex. 2 at 9:12-17) The spring elastic support element mitigates the streaking problem by maintaining an even distribution of pressure in spite of any changes in windshield curvature. (D.I.

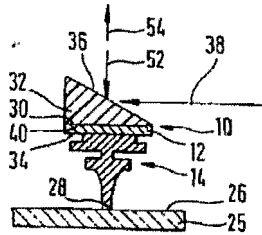
176, ex. 1 at 1:7-23) Beam blades have the additional advantages of a minimized profile and reduced noise levels during operation. (D.I. 176, ex. 2 at 17:25-18:7) However, while avoiding many of the problems that characterized the conventional superstructure blades, beam blades tend to “lift off” from the windshield at high speeds. (D.I. 176, ex. 1 at 1:24-46)

The Bosch patents have refined several aspects of beam blade technology, resulting in wiper blades that allow for better performance, visibility and safety on the road. The ‘974 patent, entitled “Glass Wiper Blade For Motor Vehicles,” teaches a beam blade that prevents “lift-off” issues by deflecting wind up and over the blade through the use of a flexible spoiler on top of the support element. This deflection counteracts any “lift-off” tendency by creating additional downward force along the length of the wiper blade at higher speeds. (‘974 patent at col. 1:58-2:3, 2:11-15)

Claim 1, which is representative of the invention of the ‘974 patent, claims:

[a] wiper blade for windows of motor vehicles, comprising a curved, band-shaped, spring-elastic support element which distributes a pressure applied by a wiper arm and has a concave and a convex surface which defines corresponding planes; an elongated rubber-elastic wiper strip placeable on a window to be wiped and mounted to said concave surface of said support element which faces the window, substantially longitudinally parallel to said concave surface; a connection device provided for a wiper arm and arranged directly on a convex side of said support element; and a component which is separate from said wiper strip and is mounted directly to the convex surface of said support element so as to form a leading-edge face extending in a longitudinal direction of the support element and forming, as seen crosswise to its longitudinal extension, an acute angle with a plane which extends parallel to a plane formed by said convex surface.

Figure 3 of the ‘974 patent discloses the cross section of an exemplary wiper blade:



The subject matter of the '434 patent, entitled "Wiper Blade For The Glass Surfaces Of Motor Vehicles With An Elongated, Spring-Elastic Support Element," addresses innovations with respect to wiper blade end caps. End caps serve a safety function, preventing injury to those who handle the wiper blades by covering the often sharp ends of the support element. ('434 patent at col. 1:63-65) However, end caps can adversely affect the elasticity of the spring element which, in turn, disrupts the wiper strip's even distribution of pressure upon the windshield. (*Id.* at col. 1:46-50) The '434 patent discloses end caps that are used to maintain the integrity of the wiper blade without adversely affecting the elasticity of the beam. (*Id.*) Claim 1 claims

[a] wiper blade for windows or other glass of motor vehicles, having an elongated, spring-elastic support element, on whose side toward the window or glass an elongated, rubber-elastic wiper strip that can be placed against the window or glass is located parallel to the longitudinal axis, and on the side of the support element remote from the window or glass, in the middle portion of the support element, a device for attaching a driven wiper arm is disposed, the **two ends of the wiper blade each being covered** by a respective termination part in the region of the support element, characterized in that the termination part has a base body, located on the side of the support element remote from the window and bracing itself on the wiper blade, which base body is provided with hook-like extensions that cross the support element on both of its long sides and engage the side of the support element toward the window from behind; that at least one **detent shoulder** pointing toward the other end portion is disposed on each of the two end portions of the support element, and a counterpart shoulder present on the termination part is associated with the detent shoulder; and that at least one of the two shoulders and/or at least one of the two extensions is

elastically deflectable.

(emphasis added)

The '905 patent is entitled "Wiper Blade For Cleaning Screens In Particular On Motor Vehicles." Although existing separately from the '974 patent family, the '905 patent discloses the structure of a spoiler that could be used in conjunction with the invention of the '974 patent. The spoiler taught by the '905 patent includes two diverging legs, with an attack surface embodied on the outside of one leg, allowing for a reduction in both weight and material costs. ('905 patent at col. 1:55-64) An exemplary claim of the '905 patent reads:

1. A wiper blade for cleaning windows, comprising:

a band-like, elongated, spring-elastic support element, wherein a lower band surface of the support element oriented toward the window has an elongated, rubber-elastic wiper strip, disposed on it so that the longitudinal axes of these two parts are parallel, wherein the wiper strip can be placed against a window, and wherein an upper band surface of the support element has a **wind deflection strip** disposed on it, which extends in the longitudinal direction of the support element, is provided with an attack surface oriented toward the main flow of the relative wind, and is made of an elastic material, wherein the wind deflection strip has **two diverging legs**, viewed in transverse cross section, wherein the two diverging legs are connected to each other at a common base and wherein free ends of the two diverging legs oriented toward the window are supported on the support element of the wiper blade, and the attack surface is embodied on the outside of the one leg above the support element, and the legs form therebetween an angular hollow space that expands from an upper narrowest point of the base downwardly to the upper band surface of the support element and are in contact with the upper band surface of the support element said legs contacting the upper band surface at a location laterally spaced from said rubber-elastic wiper strip.

(emphasis added) The '905 patent also describes wiper blades that incorporate end caps. (col. 7:60-8:21)

The '512 patent, titled "Wiper Blade For Cleaning Vehicle Windows," describes

and claims a beam blade characterized by a support element consisting of two band-like spring strips that are connected by at least two welded crosspieces. ('512 patent at col. 1:42-63) The dual band configuration avoids the adverse elasticity effects associated with the use of a single band, while facilitating component installation. (*Id.* at col. 1:26-38) It is further specified that any such welded crosspieces disposed at the end sections of the beam should be covered by an end cap, preferably made of plastic. (*Id.* at col. 2:32-35) Exemplary claim 1 is directed to

[a] wiper blade for windows of motor vehicles, having an elongated, rubber-elastic wiper strip, which can be placed against the window and is connected to an elongated, spring-elastic support element so that their longitudinal axes are parallel, which support element is directly connected to a device for connecting the wiper blade to a driven wiper arm, wherein the support element has two band-like spring strips, which are situated in a plane that is disposed in front of the window, essentially parallel to the window, and whose, lower band surfaces are oriented toward the window and whose adjacent, inner longitudinal edges, which are disposed spaced a distance apart from each other, each protrude into a respective longitudinal groove, which grooves are associated with each longitudinal edge and are each open toward a respective longitudinal side of the wiper strip, and these two spring strips are connected to each other by at least two crosspieces disposed spaced apart from each other in the longitudinal direction, wherein each crosspiece has a middle section which extends spaced a distance apart from the upper band surfaces of the spring strips, producing bridge-like crosspieces defining a bridgewidth, where the distance between the two longitudinal strips is less than the bridge width, wherein the crosspieces are attached to the upper band surfaces of the two spring strips, wherein the crosspieces are welded to the two spring strips, so that the wiper strip from an end of the support element is insertable linearly between the longitudinal edges of the spring strips facing one another, and wherein each crosspiece disposed at the end sections of the two spring strips is provided with a covering cap preferably made of plastic.

Pylon's '380 patent, entitled "Wiper Blade Connector," is directed to a connector for coupling various types of wiper blades to the wiper arm of a motor vehicle. Wiper

arms have a variety of configurations; the connector of the '380 patent facilitates the coupling of, e.g., pin and hook-type wiper arms. ('380 patent at col. 1:9-20, 2:38-41)

Representative claim 1 claims

[a] connector for connecting a wiper blade assembly to a wiper arm, said connector comprising:

- first and second side walls spaced from one another;
- a central bridge interconnecting said first and second side walls, said central bridge and first and second side walls defining a pin passage and a rivet passage; and
- a rail interconnecting said first and second side walls and vertically spaced from said central bridge to define a tail space between said bridge and said rail, said rail having a forwardmost free end positioned rearward of said pin passage and said rivet passage to define a rail-free hook insertion space below said bridge, forward of said pin passage, and between said side walls.

B. Activities Leading Up to the Filing of the Bosch Patents

1. Variflex

Adriaan Swanepoel ("Swanepoel"), a South African engineer, conceived of the "Variflex" bracketless wiper blade in the late 1980s. (D.I. 176, ex. 35 at 17:15-19:18) Unlike earlier incarnations, the Variflex blade tapered, in at least one dimension, away from the central connection device. (*Id.* at 90:1-18) In 1990, Swanepoel approached Anglo American Industrial Corporation ("AMIC") representatives Johannes Fehrsen ("Fehrsen") and Laurence Olivier ("Olivier") in an effort to develop and commercialize the Variflex blade. Fehrsen, the CEO of an AMIC subsidiary, was charged with the responsibility of commercializing and marketing the Variflex project. (D.I. 176, ex. 36 at 22:13-21) Olivier was an AMIC executive who oversaw the business side of new technology developments. (D.I. 176, ex. 37 at 15:23-16:4)

Swanepoel's work vis-a-vis the Variflex blade culminated in several patents,

including U.S. Patent No. 5,325,564 ("the '564 patent"). In addition to improvements to the overall beam blade design, during 1990-1991, AMIC and Swanepoel allegedly considered beam blade peripherals, such as spoilers and end caps. (D.I. 207, ex. 1 at 24:8-13, ex. 2 at 20:20-21:14, ex. 3 at 20:19-24) Specifically, Pylon alleges that, in mid-1991, AMIC and Swanepoel sought to counteract the effects of "lift off." (D.I. 207, ex. 1 at 24:8-13, ex. 3 at 39:5-40:2) In connection with these efforts, Fehrsen and Swanepoel jointly and/or individually conceived of several prototype spoilers including: (1) a metal spoiler attached to the convex surface of the beam ("Spoiler to Beam"); (2) a rubber or elastomeric spoiler glued to the convex surface of the beam ("Triangular Spoiler"); and (3) an aerofoil built into the wiper strip such that the beam itself is inclined ("Inclined Beam"). (D.I. 207, ex. 1 at 35:18-36:11, 49:23-50:4, 52:25-54:6, ex. 2 at 33:8-34:1, see ex. 5 at 114:18-21) Correspondence between AMIC, Swanepoel and a South African patent attorney, dated April 9, 1992, references the possibility of filing patent applications to certain design concepts, including an application to "the use of a spoiler or aerofoil" on a beam wiper blade ("the Adams letter"). (D.I. 176, ex. 41 at 2-3) Fehrsen, Swanepoel and Olivier each testified that, prior to January 1992, AMIC and Swanepoel also considered the use of end caps to protect consumers from the sharp edges of the beam. (D.I. 207, ex. 1 at 57:6-58:2, ex. 2 at 34:5-13, ex. 3 at 65:24-66:9)

2. The AMIC/Bosch meetings

Concurrently, AMIC and Bosch GmbH engaged in a joint development proposal regarding the Variflex technology. The parties do not dispute that, during the initial discussions, AMIC provided Bosch GmbH with the results of high speed tests performed upon the Variflex blades. (D.I. 207, ex. 2 at 33:8-34:1) AMIC also supplied sample

blades to Bosch GmbH. (D.I. 176, ex. 35 at 27:8-18) These sample blades did not include any peripherals. (*Id.* at 29:7-14) The record demonstrates that the entities took part in several meetings during the early 1990s, with Fehrsen, Olivier and Swanepoel representing AMIC and Wilfred Merkel (“Merkel”) and Wolfgang Leutsch (“Leutsch”) representing Bosch GmbH. (D.I. 207, ex. 1 at 147:12-148:12, 170:13-22, ex. 3 at 54:2-55:6)

The parties’ recollection of what transpired at these meetings diverges at the September 17, 1992 meeting (“the September meeting”). Pylon alleges it was at this meeting, between Fehrsen, Olivier, Merkel and Leutsch, and directed to the resolution of the “lift-off” issues, that Fehrsen disclosed the “Triangular Spoiler” and “Inclined Beam” solutions to Merkel and Leutsch. (D.I. 207, ex. 1 at 47:13-49:22, ex. 3 at 59:19-60:19, 62:9-63:14) Conversely, Bosch alleges that Merkel and Leutsch pitched the “Triangular Spoiler” idea, attributing only the “Inclined Beam” concept to Fehrsen. (D.I. 175, ex. 2 at 16:23-25; D.I. 176, ex. 39 at 23:13-23) The only documentary evidence regarding these disclosures is embodied in Fehrsen’s meeting notes, depicted below, which diagram both solutions but do not attribute ownership of either concept. (D.I. 176, ex. 40)



“Triangular Spoiler”



“Inclined Beam”

The parties also dispute whether Fehrsen disclosed end caps to Bosch GmbH at the September meeting. Fehrsen and Olivier testified that, at this meeting, Fehrsen presented a sample beam blade with end caps. (D.I. 207, ex. 1 at 156:13-23, ex. 3 at 67:5-20) Bosch LLC denies these allegations. The allegedly disclosed end cap appears again in a jointly-prepared "Variflex terminology" diagram, which was prepared some seven months after the September meeting. (*Id.*, ex. 1 at 57:6-58:2, ex. 2 at 65:1-66:16; D.I. 243, ex. 85) Pylon also alleges that Thomas Kotlarski ("Kotlarski"), a Bosch employee and named inventor of the '434 patent, interfaced with Swanepoel and had access to this diagram as well as other AMIC files that pertained to the alleged disclosed end cap. (D.I. 207, ex. 1 at 84:8-16, ex. 2 at 36:5-37:5)

3. The Bosch patents

In October 1996, the business relationship between Bosch GmbH and AMIC formally ended. (D.I. 176, ex. 36 at 157:7-12) Bosch LLC alleges that Bosch GmbH continued to develop its own beam blade designs, and eventually filed the patent applications that resulted in, among others, the '974, '905 and '434 patents. In 1998, AMIC sold its interests in the Variflex technology to Trico Products Corporation ("Trico"), a competitor of Bosch GmbH.² (*Id.*, ex. 40) Bosch LLC does not dispute that it made several (unsuccessful) attempts to purchase or license beam blade technology from AMIC and then, after AMIC's transfer of intellectual property, from Trico. (D.I. 207, ex. 1 at 105:10-109:16) Fehrsen and Swanepoel subsequently left AMIC and joined Trico as

²The purchase agreement between AMIC and Trico includes a warranty by AMIC that Bosch GmbH had not made any use of the AMIC technology at issue. (*Id.* at ¶ 2.6) The purchase agreement further warranted that there was no joint development arising from the interaction between Bosch GmbH and AMIC. (*Id.* at ¶ 2.5)

consultants.³ (D.I. 176, ex. 36 at 117:190121:2, ex. 35 at 72:16-74:18)

After learning of Bosch GmbH's efforts to obtain patent protection, Trico requested that Fehrsen and Swanepoel memorialize their recollection regarding the conception of the spoiler and end cap technology, as well as the particulars regarding the joint development efforts between Bosch GmbH and AMIC. (D.I. 176, ex. 35 at 52:3-53:3, ex. 43 at 2) On July 12, 2001, Trico sent a letter to AMIC expressing its concerns regarding the subject matter of the pending patent applications.⁴ (D.I. 176, ex. 44) AMIC subsequently contacted Bosch LLC with respect to the contentions of Fehrsen and Swanepoel, to wit, that Fehrsen and Swanepoel were the sole inventors of, inter alia, the end cap and spoiler disclosed in the German counterparts to the '434 and '974 patents, respectively. (*Id.*, ex. 46) Bosch conducted an internal investigation in which it concluded that neither Fehrsen nor Swanepoel contributed to any of the subject matter found in these applications. (*Id.*, ex. 47, ex. 48) The Bosch patents do not list Fehrsen or Swanepoel among the named inventors.

C. The Accused Products

1. The accused Pylon products

Three versions of Pylon's beam blades, referred to as Generation 1, 2 and 3 beam blades, stand accused of infringing the Bosch patents. These wiper blades are marketed and sold under both the Toyota brand name and the Michelin brand name; the

³Swanepoel continues to provide consulting services to Trico. (D.I. 176, ex. 35 at 73:14-20)

⁴Specifically, Trico wrote to AMIC regarding the German counterparts to the '974 (DE 197 36 368) and '434 patents (DE 198 02 451).

Michelin brand name products are Optimum, Symphony, Radius, Weatherwise, and HydroEdge (“the Accused Pylon Products”). Pylon introduced the Generation 1 beam blade in 2006. (D.I. 175, ex. 13 at 37:24-38:4) According to Pylon’s Engineering Manager David Frauman (“Frauman”), the Generation 1 beam blade consists of two beams, a spoiler, two end caps, a wiping strip and a mounting base, including a mounting base cover for connecting the wiper blade to the wiper arm. (*Id.*, ex. 14 at 49:2-5; ex. 7, 38:25-39:6, 98:2-3, 126:22-127:7) The Generation 2 beam blade, released in 2007, includes a single beam and modified end caps, which prevent the spoiler from sliding on the beam. (*Id.* at 90:8-91:5; 97:25-98:1) Pylon’s Generation 3 beam blades, first sold in 2009, likewise have a single beam, but include a narrow longitudinal groove running along the center of the blade and a different end cap design. (*Id.* at 127:5-14, 130:20-131:3)

As a whole, the Accused Pylon Products have several similar characteristics. Each generation includes a beam, a triangular spoiler secured to a convex surface of a support element, two end caps, a wiping strip connected to a concave surface of a support element, and a mounting base for connecting the wiper blade to the wiper arm. (*Id.* at 38:25-39:6; ex. 3 at 296:11-297:15) A plastic beauty cover prevents exposure of the mounting base. The parties dispute whether the beauty cover also plays a role in connecting the wiper blade to a wiper arm, and whether it further prevents the spoiler from making any physical contact⁵ with the part that connects the wiper blade to a wiper

⁵Indeed, Pylon seemed acutely aware of the ‘905 patent, which requires that a section of the spoiler be disposed between, and in contact with, each respective end cap and the mounting base. (‘905 patent at claim 13) An April 3, 2009 email from Pylon engineer Vambi Tolentino to Pylon’s supplier cautioned that the supplied “spoiler

arm. (D.I. 178 at ¶¶ 22, 23; D.I. 198, ex. 57 at 117:23-118:5, ex. 60 at 26)

2. The accused Bosch product

Bosch LLC's U3 connector ("the U3 connector") is sold with certain Bosch Evolution brand wiper blades. The U3 connector allows the wiper blade to couple to one or more wiper arm types. The U3 connector has a semicircular cutout that requires a separate adapter to lockingly engage a wiper arm pin. (D.I. 175, ex. 3 at 187:16-19, ex. 26 at 346:17-348:3) This adapter is not part of the accused U3 connector. (D.I. 175, ex. 3 at 187:16-19)

III. STANDARD OF REVIEW

A court shall grant summary judgment only if "the pleadings, depositions, answers to interrogatories, and admissions on file, together with the affidavits, if any, show that there is no genuine issue as to any material fact and that the moving party is entitled to judgment as a matter of law." Fed. R. Civ. P. 56(c). The moving party bears the burden of proving that no genuine issue of material fact exists. *See Matsushita Elec. Indus. Co. v. Zenith Radio Corp.*, 475 U.S. 574, 586 n.10 (1986). "Facts that could alter the outcome are 'material,' and disputes are 'genuine' if evidence exists from which a rational person could conclude that the position of the person with the burden of proof on the disputed issue is correct." *Horowitz v. Fed. Kemper Life Assurance Co.*, 57 F.3d 300, 302 n.1 (3d Cir. 1995) (internal citations omitted). If the moving party has demonstrated an absence of material fact, the nonmoving party then "must come forward with 'specific facts showing that there is a genuine issue for trial.'" *Matsushita*,

lengths do not leave a space with the cover. We are required to have a clearance between the cover & the spoiler to avoid patent infringement." (D.I. 198, ex 61)

475 U.S. at 587 (quoting Fed. R. Civ. P. 56(e)). The court will “view the underlying facts and all reasonable inferences therefrom in the light most favorable to the party opposing the motion.” *Pa. Coal Ass’n v. Babbitt*, 63 F.3d 231, 236 (3d Cir. 1995). The mere existence of some evidence in support of the nonmoving party, however, will not be sufficient for denial of a motion for summary judgment; there must be enough evidence to enable a jury reasonably to find for the nonmoving party on that issue. See *Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 249 (1986). If the nonmoving party fails to make a sufficient showing on an essential element of its case with respect to which it has the burden of proof, the moving party is entitled to judgment as a matter of law. See *Celotex Corp. v. Catrett*, 477 U.S. 317, 322 (1986).

IV. DISCUSSION

A. Invalidity⁶

The standard of proof to establish the invalidity of a patent is “clear and convincing evidence.” *Golden Blount, Inc. v. Robert H. Peterson Co.*, 365 F.3d 1054, 1058 (Fed. Cir. 2004). In conjunction with this burden, the Federal Circuit has explained that,

[w]hen no prior art other than that which was considered by the PTO examiner is relied on by the attacker, he has the added burden of overcoming the deference that is due to a qualified government agency presumed to have properly done its job, which includes one or more examiners who are assumed to have some expertise in interpreting the references and to be familiar from their work with the

⁶Insofar as the court concludes *infra* that the Accused Pylon Products do not infringe the ‘512 patent, Pylon’s motion for summary judgment of invalidity with respect to the ‘512 patent is denied as moot. It is noteworthy, however, that the PTO considered all of the asserted prior art (DE 196 27 114, DE 196 27 115 and WO 98/50261), including the combinations of such proffered by Pylon, during prosecution of the ‘512 patent. (D.I. 165, ex. 7 at JA928, ex. 8 at JA1214-17)

level of skill in the art and whose duty it is to issue only valid patents.

PowerOasis, Inc. v. T-Mobile USA, Inc., 522 F.3d 1299, 1304 (Fed. Cir. 2008) (quoting *Am. Hoist & Derrick Co. v. Sowa & Sons*, 725 F.2d 1350, 1359 (Fed. Cir. 1984)).

1. Anticipation

An anticipation inquiry involves two steps. First, the court must construe the claims of the patent in suit as a matter of law. See *Key Pharms. v. Hercon Labs. Corp.*, 161 F.3d 709, 714 (Fed. Cir. 1998). Second, the finder of fact must compare the construed claims against the prior art. See *id.*

Proving a patent invalid by anticipation “requires that the four corners of a single, prior art document describe every element of the claimed invention, either expressly or inherently, such that a person of ordinary skill in the art could practice the invention without undue experimentation.” *Advanced Display Sys. Inc. v. Kent State Univ.*, 212 F.3d 1272, 1282 (Fed. Cir. 2000) (citations omitted). The Federal Circuit has stated that “[t]here must be no difference between the claimed invention and the referenced disclosure, as viewed by a person of ordinary skill in the field of the invention.” *Scripps Clinic & Research Found. v. Genentech, Inc.*, 927 F.2d 1565, 1576 (Fed. Cir. 1991). The elements of the prior art must be arranged or combined in the same manner as in the claim at issue, but the reference need not satisfy an ipsissimis verbis test. *In re Gleave*, 560 F.3d 1331, 1334 (Fed. Cir. Mar. 26, 2009) (citations omitted). “In determining whether a patented invention is [explicitly] anticipated, the claims are read in the context of the patent specification in which they arise and in which the invention is described.” *Glaverbel Societe Anonyme v. Northlake Mktg. & Supply, Inc.*, 45 F.3d 1550,

1554 (Fed. Cir. 1995). The prosecution history and the prior art may be consulted “[i]f needed to impart clarity or avoid ambiguity” in ascertaining whether the invention is novel or was previously known in the art. *Id.* (internal citations omitted).

Pylon argues that the asserted claims of the ‘974 patent are invalid as anticipated by U.S. Patent No. 3,881,214 (“the ‘214 patent”).⁷ The ‘214 patent teaches a wiper blade comprised of a support element, a wiper strip and a metal backing strip combined with a rubber element. The metal backing strip/rubber element combination runs the length of the wiper blade along a channel formed by the support element. (D.I. 180, ex. 6) The ‘214 patent does not disclose the beam blade of the ‘974 patent. The expert report of Dr. Steven Dubowsky (“Dubowsky”), Bosch LLC’s expert, characterizes the inventions of the ‘214 and ‘974 patents as containing material differences. (D.I. 198, ex. 53) Specifically, Dubowsky opines that, instead of the beam blade of the ‘974 patent, the ‘214 patent teaches a wiper blade made of thermoplastic material comprising a “supporting structure” that has the function of a spring and includes recesses, the height of which decreases progressively from the center towards the distal ends of the wiping element, allowing the structure to deform during use and exert substantially uniform pressure on the window. (*Id.* at 11)

The parties’ experts also dispute the identity of the “curved, band-shaped spring-elastic support element” that “distributes a pressure applied by a wiper arm and has a concave and a convex surface which defines corresponding planes” as claimed in the ‘974 patent. Pylon asserts that element 110 of the ‘214 patent meets this limitation. The

⁷The French equivalent of the ‘214 patent (FR 2 199 302) was considered during prosecution of the ‘974 patent. (D.I. 162, ex. 2 at 70, 83-95)

'214 patent teaches that element 110 accomplishes the function of "maintaining substantially undeformed the supporting structure 1 of the windshield wiper blade when the force applied onto the windshield wiper blade ceases, so that the latter, keeping always its original camber, is always in a position to accomplish its spring function." ('214 patent at col. 3:55-60) Dubowsky's deposition testimony, consistent with the specification of the '214 patent, argues that element 110 does not perform the pressure distribution function and is devoid of an initial curvature. (D.I. 198, ex. 55 at 311:5-314:9) Rather, Dubowsky submits that "supporting structure 1," provides the pressure distribution function. (*Id.* at 312:15-19) And while "supporting structure 1" could meet the "component" limitation⁸ of the '974 patent, a material issue of fact exists with respect to whether the same structure could simultaneously meet the "support element" limitation.

Moreover, the '214 patent does not disclose a connection device arranged directly on the convex side of the structure that Pylon argues meets the spring-elastic support element limitation of the '974 patent, i.e., element 110. ('274 patent at col. 2:12-14) The connection device is instead arranged directly on the "supporting structure 1." (*Id.* at col. 4:15-16)

Pylon has failed to carry the exceptional burden necessary to prevail on a motion for summary judgment of invalidity in which the PTO previously considered the only asserted prior art. See *PowerOasis*, 522 F.3d at 1304. For the aforementioned reasons, Pylon's motion for summary judgment of invalidity is denied to the extent that

⁸Bosch LLC's arguments that the '214 patent does not disclose a spoiler lack merit in light of the broadly construed "component" limitation.

the '214 patent does not anticipate the '974 patent.

2. Obviousness

"A patent may not be obtained . . . if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art." 35 U.S.C. § 103(a). Obviousness is a question of law, which depends on several underlying factual inquiries.

Under § 103, the scope and content of the prior art are to be determined; differences between the prior art and the claims at issue are to be ascertained; and the level of ordinary skill in the pertinent art resolved. Against this background the obviousness or nonobviousness of the subject matter is determined. Such secondary considerations as commercial success, long felt but unsolved needs, failure of others, etc., might be utilized to give light to the circumstances surrounding the origin of the subject matter sought to be patented.

KSR Int'l Co. v. Teleflex Inc., 550 U.S. 398, 406 (2007) (quoting *Graham v. John Deere Co.*, 383 U.S. 1, 17-18 (1966)). "Because patents are presumed to be valid, see 35 U.S.C. § 282, an alleged infringer seeking to invalidate a patent on obviousness grounds must establish its obviousness by facts supported by clear and convincing evidence." *Kao Corp. v. Unilever U.S., Inc.*, 441 F.3d 963, 968 (Fed. Cir. 2006) (citation omitted).

"[A] patent composed of several elements is not proved obvious merely by demonstrating that each of its elements was, independently, known in the prior art." *KSR*, 550 U.S. at 418. Likewise, a defendant asserting obviousness in view of a combination of references has the burden to show, by clear and convincing evidence, that a person of ordinary skill in the relevant field had a reason to combine the elements in the manner claimed. *Id.* at 418-19. The Supreme Court has emphasized the need for

courts to value “common sense” over “rigid preventative rules” in determining whether a motivation to combine existed. *Id.* at 419-20. “[A]ny need or problem known in the field of endeavor at the time of invention and addressed by the patent can provide a reason for combining the elements in the manner claimed.” *Id.* at 420.

In addition to showing that a person of ordinary skill in the art would have had reason to attempt to make the composition or device, or carry out the claimed process, a defendant must also demonstrate, by clear and convincing evidence, that “such a person would have had a reasonable expectation of success in doing so.” *PharmaStem Therapeutics, Inc. v. ViaCell, Inc.*, 491 F.3d 1342, 1360 (Fed. Cir. 2007).

Pylon argues that the asserted claims of the ‘974 patent are invalid as rendered obvious by (1) U.S. Patent No. 3,881,214 (“the ‘214 patent”), alone or in combination with U.S. Patent No. 5,325,564 (“the ‘564 patent”), and (2) rendered obvious in view of the ‘564 patent in combination with U.S. Patent No. 3,879,793 (“the ‘793 patent”). Pylon argues that, to the extent that the ‘214 patent fails to disclose any elements, these elements are taught by the ‘564 patent. Pylon argues alternatively that, treating the ‘564 patent as the primary reference and combining it with “component” of the ‘214 patent, one of ordinary skill would arrive at the claimed invention of claims 1, 2 and 8 of the ‘974 patent.

As an initial matter, Pylon has not demonstrated the presence of a motivation to combine the ‘214 patent and the ‘564 patent, based in common sense or otherwise. *KSR*, 550 U.S. at 418. The ‘564 patent teaches the basic elements of a beam blade. Pylon’s position is that the structure it identified as the “component” of the ‘214 patent

(“supporting structure 1”) may be combined with “spring backbone 10” of the ‘564 patent to address the lift-off problem solved by the ‘974 patent. (D.I. 180, ex. 9 at 4) As noted *supra*, the parties dispute the functionality of “supporting structure 1.” Laboring under Dubowsky’s characterization of “supporting structure 1,” this would result in the combination of two pressure distribution elements; the court cannot comprehend any motivation that would lead one of ordinary skill in the art to combine two support elements.

Alternatively, Pylon argues that the ‘974 patent is rendered obvious by a combination of the ‘564 patent and the ‘793 patent. The ‘793 patent teaches a conventional wiper blade including a superstructure consisting of yokes and hinges. (‘793 patent at col. 1:60-65, 2:39-45, Figs. 1, 3) The superstructure further includes “a primary yoke” in the shape of a triangular spoiler with a leading edge face that “forms an acute angle with respect to a plane extending substantially parallel to the surface to be wiped.” (*Id.* at col. 3:55-57) Pylon argues that it would have been obvious to combine the beam blade of the ‘564 patent with the spoiler feature taught by the ‘793 patent “given the limited number of ways one of ordinary skill in the art would know to address the wind lift presented with the ‘564 patent.” (D.I. 180, ex. 9 at 2)

The ‘793 patent notes that several “satisfactory” configurations exist for addressing the lift-off issue in conventional wiper blades, “including the use of fins or vanes, bifurcated tilting metal strip yokes, airfoils, and yokes pierced with a plurality of holes.” (‘793 patent at col. 1:23-26) Accordingly, significant issues of material fact exist with respect to whether the specific combination of a spoiler and beam blade was obvious to try. See *KSR*, 550 U.S. at 420. Specifically,

[w]hen there is a design need or market pressure to solve a problem and there are a finite number of identified, predictable solutions, a person of ordinary skill has good reason to pursue the known options within his or her technical grasp. If this leads to the anticipated success, it is likely the product not of innovation but of ordinary skill and common sense.

Id.

Bosch LLC argues against the existence of any such common sense result, noting that if the lift-off issues with beam blades could be so easily solved, “it would not have taken decades to arrive at that structure.” (D.I. 197 at 33) Moreover, Dubowsky opines that one of ordinary skill would have been concerned that the addition of a spoiler to the support element of a beam blade would undesirably increase the overall stiffness of the beam blade. (D.I. 235 at ¶ 21) In a related theory, Dubowsky submits that the ‘793 patent teaches away from the use of a separate spoiler in that

the anti-windlight configuration built into the superstructure [is] without the need for separate [spoiler] attachments commonly used in the past. The anti-windlift feature is provided by forming a ramp portion in the primary yoke and optionally in either or both of the secondary yokes

(‘793 patent at col. 3:48-55) Finally, Bosch LLC submits extensive evidence regarding secondary considerations of nonobviousness in connection with the ‘974 patent, including evidence of long felt need, commercial success and copying. While Bosch LLC must, as Pylon notes, demonstrate a nexus between the commercial success of its products and the invention of the ‘974 patent, *Demaco Corp. v. F. Von Langsdorff Licensing, Ltd.*, 851 F.2d 1387, 1392 (Fed. Cir. 1988), it will have a chance to do so at trial. Indeed, several material issues preclude the grant of summary judgment of invalidity of the ‘974 patent. For these reasons, Pylon’s motion is denied.

3. Derivation

"A person shall be entitled to a patent unless . . . he did not himself invent the subject matter sought to be patented." 35 U.S.C. § 102(f). Assertion of this subsection as a defense amounts to a claim that the patentee derived the invention from another. See *Price v. Symsek*, 988 F.2d 1187, 1190 (Fed. Cir. 1993). A party bringing a claim for patent invalidity under 35 U.S.C. § 102(f) must demonstrate by clear and convincing evidence both conception of the invention by another and communication of the invention to the patentee. *Gambro Lundia AB v. Baxter Healthcare Corp.*, 110 F.3d 1573, 1576 (Fed. Cir. 1997) (citing *Price*, 988 F.2d at 1190).

Conception is the "formation in the inventor's mind of a definite and permanent idea of the complete and operative invention, as it is hereafter to be applied in practice." *Hybritech, Inc. v. Monoclonal Antibodies, Inc.*, 802 F.2d 1367, 1376 (Fed. Cir. 1986) (citations omitted). A conception must encompass all limitations of the claimed invention, and "is complete only when the idea is so clearly defined in the inventor's mind that only ordinary skill would be necessary to reduce the invention to practice, without extensive research or experimentation." *Singh v. Brake*, 317 F.3d 1334, 1340 (Fed. Cir. 2002) (citations omitted). Put differently, every limitation must be shown to have been known to the inventor at the time the invention is alleged to have been conceived. *Davis v. Reddy*, 620 F.2d 885, 889 (C.C.P.A. 1980) (citing *Schur v. Muller*, 372 F.2d 546, 551 (1967); *Anderson v. Anderson*, 403 F. Supp. 834, 846 (D. D.C. 1975)).

Upon the issuance of a patent, it is presumed that there are no inventors other than those listed on the patent. *Bd. of Educ. v. American Bioscience, Inc.*, 333 F.3d

1330, 1337 (Fed.Cir.2003). A party challenging this presumption must prove, by clear and convincing evidence, that it significantly contributed to the conception of the invention. *Id.* An inventor's testimony stating that he contributed to the conception at issue is not, by itself, enough to support a finding of inventorship. Such testimony must be corroborated by either contemporaneous documents, testimony of someone else or circumstantial evidence. *Ethicon, Inc. v. United States Surgical Corp.*, 135 F.3d 1456, 1461 (Fed.Cir.1998). "Circumstantial evidence about the inventive process may also corroborate" the inventor's testimony. *Id.* (citing *Knorr v. Pearson*, 671 F.2d 1368).

Factors to be considered in assessing corroboration include:

- (1) the relationship between the corroborating witness and the alleged prior user;
- (2) the time period between the event and trial; (3) the interest of the corroborating witness in the subject matter in suit; (4) contradiction or impeachment of the witness' testimony; (5) the extent and details of the corroborating testimony; (6) the witness' familiarity with the subject matter of the patented invention and the prior use; (7) probability that a prior use could occur considering the state of the art at the time; (8) impact of the invention on the industry, and the commercial value of its practice.

Woodland Trust v. Flowertree Nursery, 148 F.3d 1368, 1371 (Fed. Cir. 1998). "Whether the inventor's testimony has been sufficiently corroborated is evaluated under a 'rule of reason analysis,'" which requires that "an evaluation of all pertinent evidence must be made so that a sound determination of the credibility of the alleged inventor's story may be reached." *Ethicon* 135 F.3d at 1461 (quoting *Price v. Symsek*, 988 F.2d 1187, 1194 (Fed. Cir. 1993)).

Bosch LLC advances two arguments in support of its motion for summary judgment that the '974, '905 and '434 patents are not invalid for derivation. As a procedural matter, Bosch LLC alleges that Pylon failed to properly plead its derivation

defense. Specifically, Bosch LLC alleges that the pleadings do not provide the requisite level of notice, and that prejudice will result if Pylon is allowed to maintain this defense. This argument is without merit. Federal Rule of Civil Procedure 8 ("Rule 8") requires a party to set forth affirmative defenses in a responsive pleading with a "short and plain statement." *McKesson Information Solutions, LLC v. Trizetto Group, Inc.*, 2005 WL 914776, at *1 (D. Del. April 20, 2005). A cursory review of Pylon's second amended answer reveals numerous instances that would put Bosch LLC on notice of both the existence and scope of Pylon's derivation defense. This notice is present in Pylon's (1) affirmative defense that the Bosch patents are invalid for failure to comply with the conditions of patentability set forth in 35 U.S.C. § 102; (2) affirmative defense that "one or more of [the Bosch patents] are invalid and unenforceable because the invention(s) were derived and/or misappropriated from the true inventors"; and (3) detailed allegations of the factual support for these defenses that span 10 pages in count III of its counterclaims. (D.I. 55 at 4, 6, 8-17)

Nor can the court agree with Bosch LLC's contentions that Pylon failed to act with reasonable diligence in asserting the derivation defense. The Third Circuit has held that Rule 8 requires an affirmative defense to be pled in the answer or "raised at the earliest practical moment thereafter." *Robinson v. Johnson*, 313 F.3d 128, 137 (3d Cir. 2002). Pylon learned of the Bosch GmbH/AMIC joint development efforts on or about May 5, 2009 pursuant to a subpoena served upon Trico. Pylon filed its second amended answer on May 22, 2009. This time line does not suggest a lack of diligence on Pylon's behalf.

Bosch LLC next attacks the merits of the derivation defense, arguing that Pylon

has not corroborated Fehrsen's testimony and, accordingly, Pylon's defense is unsupported by clear and convincing evidence as a matter of law. Fehrsen's testimony, standing by itself, cannot overcome the presumption that the Bosch patents identify the correct inventors. *See Price*, 988 F.2d at 1194. In recognition of this hurdle, the parties' arguments are primarily drawn to the characterization of Fehrsen's notes from the September meeting, as well as the earlier Adams letter.

Because Fehrsen's notes do not attribute the ownership of either solution, Bosch LLC argues that this evidence cannot corroborate his claims of inventorship. According to Bosch LLC, the only permissible inference arising from Fehrsen's notes is that **someone** at the September meeting disclosed these ideas. Consistent with the uncertain ownership evinced by such an inference, the parties have offered conflicting testimony as to who actually conceived of the solutions depicted in Fehrsen's notes. Merkel claims that he and Leutsch disclosed the Inclined Beam and Triangular Spoiler solutions, and that Fehrsen merely copied them into his notes. Olivier's testimonial support of Fehrsen's claim to the solutions displayed in his notes comports with the corroboration requirement.⁹

⁹Bosch LLC takes issue with Olivier's testimony as evidence of corroboration, citing to *Woodland Trust*. 148 F.3d at 1371. Specifically, Bosch LLC alleges that the close business relationship between Olivier and Fehrsen, as well as Olivier's inability to recall, with exacting detail, a transaction that occurred seventeen years ago. First, any relationship between Olivier and Fehrsen ended roughly a decade ago, and Olivier has no evident interest in this litigation. Moreover, the simple fact that Olivier needed to be refreshed by Fehrsen's notes before testifying to Fehrsen's disclosure does not, per se, render Olivier's testimony suspect.

While not inapposite to the corroboration analysis, these factors are less compelling due to the consistency between Olivier's testimony and the documentary evidence of record, including Fehrsen's notes and the Adams letter. This treatment comports with *Woodland Trust*, in which the Federal Circuit explained that there is "a

Although conflicting testimony regarding inventorship can “create a genuine issue of material fact regarding the identity of the true inventor,” *Virginia Elec. & Lighting Corp. v. National Serv. Indus.*, 2000 WL 12729, at *6 (Fed. Cir. 2000), the inference that Fehrsen conceived of the solutions depicted by his notes and communicated them to Merkel and Leutsch at the September meeting is supported by circumstantial evidence. *In re Jolley*, 308 F.3d 1317, 1325 (Fed. Cir. 2002) (explaining that “[c]orroboation may be established by sufficient circumstantial evidence of an independent nature”) (citations omitted). Notably, Bosch LLC’s earliest purported conception date for the ‘974 patent is April 23, 1996, postdating Fehrsen’s notes by three and a half years. The Adams letter demonstrates that Fehrsen and Olivier had considered the “lift-off” problem and were working to devise (or had already devised) a spoiler to counteract such issues. And while the Adams letter is necessarily vague in providing exact details regarding the spoiler, the sum of these pieces of circumstantial evidence supports the inference that Fehrsen disclosed **his** ideas at the September meeting, which he later memorialized in his notes. These notes, which depict a Triangular Spoiler that is strikingly similar to Figure 3 of the ‘974 patent, permit a finding of corroboration for Fehrsen’s testimony regarding his prior conception.

very heavy burden to be met by one challenging validity when **the only evidence is the oral testimony** of interested persons and their friends, particularly as to long-past events.” *Id.* (emphasis added).



"Triangular Spoiler"

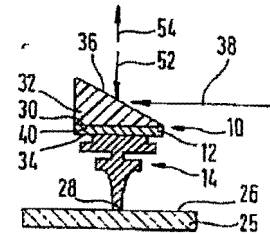


Fig. 3 of the '974 patent

Bosch LLC also questions the sufficiency of the disclosure of Fehrsen's notes, arguing that, with respect to a prior conception, "courts require corroborating evidence of a contemporaneous disclosure that would enable one skilled in the art to make the invention." *Burroughs Wellcome Co. v. Barr Lab.*, 40 F.3d 1223, 1228 (Fed. Cir. 1994). In order to satisfy the enablement requirement, the disclosure must "teach those skilled in the art how to make and use the full scope of the claimed invention without undue experimentation." *Martek Biosciences Corp. v. Nutrinova, Inc.*, 579 F.3d 1363, 1378 (Fed. Cir. 2009) (citations omitted). The determination of whether undue experimentation would be required to reduce an idea to practice is "reached by weighing many factual considerations." *Id.* (quoting *In re Wands*, 858 F.2d 731, 737 (Fed. Cir. 1988)). Resolving all facts in the light most favorable to Pylon, there are material issues of fact as to whether, upon viewing the solutions contained in Fehrsen's notes, one of ordinary skill could arrive at the invention claimed by the '974 patent through the elementary task of gluing a triangular piece of rubber onto the top of a beam blade.

Pylon presents less compelling evidence of derivation with respect to the '905 and '434 patents. As noted above, the parties dispute whether, at the September meeting,

Fehrson provided Bosch GmbH with a sample beam blade complete with end caps. Pylon proffers the Variflex terminology sheet, which was prepared several months after the meeting, as corroborative evidence for Fehrson's claim that Bosch GmbH had access to a sample beam blade with end caps. Olivier's testimony comports with Fehrson's claim. With respect to the diverging legs of the wind deflection strip required by the '905 patent, Pylon argues that such elements were well known in the art at the time of the meeting. (See U.S. Patent Nos. 3,088,155 and 3,881,214) However, Pylon fails to allege a conduit of communication between Fehrson and the named inventors of the '905 patent, none of which were present at the September meeting. Irrespective of this lack of communication, Pylon also fails to compare the alleged disclosure to the limitations of the '905 patent. And while Pylon does proffer an attenuated route of communication through Kotlarski, a named inventor of the '434 patent, no evidence of record establishes that the end cap allegedly disclosed could enable the '434 patent. Specifically, Pylon does not identify a "detent shoulder" in the Variflex terminology sheet; nor do any of Pylon's witnesses testify to this effect. In view of such, Pylon's allegations regarding the derivation the '905 and '434 patents fail as a matter of law.

4. Inequitable Conduct

Applicants for patents and their legal representatives have a duty of candor, good faith, and honesty in their dealings with the United State Patent and Trademark Office ("PTO"). *Molins PLC v. Textron, Inc.*, 48 F.3d 1172, 1178 (Fed. Cir. 1995); 37 C.F.R. § 1.56(a) (2003). The duty of candor, good faith, and honesty includes the duty to submit truthful information and the duty to disclose to the PTO information known to the patent applicants or their attorneys which is material to the examination of the patent

application. *Elk Corp. of Dallas v. GAF Bldg. Materials Corp.*, 168 F.3d 28, 30 (Fed. Cir. 1999). A breach of this duty constitutes inequitable conduct. *Mollins*, 48 F.3d at 1178. If it is established that a patent applicant engaged in inequitable conduct, then the patent application is rendered unenforceable. *Kingsdown Med. Consultants v. Hollister Inc.*, 863 F.2d 867, 877 (Fed. Cir. 1988).

In order to establish unenforceability based on inequitable conduct, a defendant must establish, by clear and convincing evidence, that: (1) the omitted or false information was material to patentability of the invention; or (2) the applicant had knowledge of the existence and materiality of the information; and (3) the applicant intended to deceive the PTO. *Mollins*, 48 F.3d at 1178. A determination of inequitable conduct, therefore, entails a two step analysis. First, the court must determine whether the withheld information meets a threshold level of materiality. A reference is considered material if there is a substantial likelihood that a reasonable examiner would consider it important in deciding whether to allow the application to issue as a patent. *Allied Colloids, Inc. v. American Cyanamid Co.*, 64 F.3d 1570, 1578 (Fed. Cir. 1995) (citations omitted). A reference, however, does not have to render the claimed invention unpatentable or invalid to be material. See *Merck v. Danbury Pharmacal*, 873 F.2d 1418 (Fed. Cir. 1989).

After determining that the applicant withheld material information, the court must then decide whether the applicant acted with the requisite level of intent to mislead the PTO. See *Exergen Corp. v. Wal-Mart Stores, Inc.*, 575 F.3d 1312, 1327 (Fed. Cir. 2009); *Baxter Int'l, Inc. V. McGaw Inc.*, 149 F.3d 1321, 1327 (Fed. Cir. 1998). "Intent to

deceive cannot be inferred solely from the fact that information was not disclosed; there must be a factual basis for finding a deceptive intent.” *Herbert v. Lisle Corp.*, 99 F.3d 1109, 1116 (Fed. Cir. 1996). That is, “the involved conduct, viewed in light of all the evidence, including evidence indicative of good faith, must indicate sufficient culpability to require a finding of intent to deceive.” *Kingsdown*, 863 F.2d at 876 (Fed. Cir. 1988). Evidence of specific intent must “be clear and convincing, and inferences drawn from lesser evidence cannot satisfy the deceptive intent requirement.” *Star Sci., Inc. v. R.J. Reynolds Tobacco Co.*, 537 F.3d 1357, 1366 (Fed. Cir. 2008). A “smoking gun,” however, is not required in order to establish an intent to deceive. See *Merck*, 873 F.2d at 1422.

Once materiality and intent to deceive have been established, the trial court must weigh them to determine whether the balance tips in favor of a conclusion of inequitable conduct. *N.V. Akzo v. E.I. DuPont de Nemours*, 810 F.2d 1148, 1153 (Fed. Cir. 1988). The showing of intent can be proportionally less when balanced against high materiality. *Id.* In contrast, the showing of intent must be proportionally greater when balanced against low materiality. *Id.*

Bosch argues that Pylon has elicited no evidence that would support any inference of specific intent to deceive the PTO with respect to the application for the ‘974 patent.¹⁰ However, “[a]n inference of intent to deceive is generally appropriate . . . when

¹⁰Insofar as Pylon has failed to meet its burden of demonstrating that no material issues of fact exist with respect to the derivation of the ‘905 and ‘434 patents, it has likewise failed to show that the inventors of these patents engaged in inequitable conduct in their interactions with the PTO. Pylon has not demonstrated that any other than the true inventors are listed on these patents and, accordingly, Pylon’s inequitable conduct arguments regarding the ‘905 and ‘434 patents must fail due to the lack of an

(1) highly material information is withheld; (2) the applicant knew of the information [and] . . . knew or should have known of the materiality of the information; and (3) the applicant has not provided a credible explanation for the withholding.” *Praxair, Inc. v. ATMI, Inc.* 543 F.3d 1306, 1314 (Fed. Cir. 2008) (internal quotations and citations omitted). A failure to disclose the true inventorship of a patent is certainly a material omission. See, e.g., *Board of Education ex rel. Florida State University v. American Bioscience, Inc.*, 333 F.3d 1330, 1344 (Fed. Cir. 2003) (a patent applicant has a duty to assure that “only true inventors” are named in a patent application and that failure to do so may result in a finding of inequitable conduct); *Frank’s Casing Crew & Rental Tools, Inc. v. PMR Techs., Ltd.*, 292 F.3d 1363 (Fed. Cir. 2002) (holding a patent unenforceable due to inequitable conduct where two named inventors deliberately concealed a true inventor’s involvement in the conception of the invention and ‘engaged in a pattern of intentional conduct designed to deceive the attorneys and patent office as to who the true inventors were’).

Accordingly, viewing all the aforementioned evidence in the light most favorable to Pylon, there are genuine issues of material fact as to whether: (1) Fehrsen conceived of the subject matter claimed in the ‘974 patent; (2) Fehrsen disclosed it to Merkel and Leutsch; (3) Merkel and Leutsch committed a highly material omission by fraudulently representing to the PTO Fehrsen’s ideas as their own; and (4) Merkel and Leutsch intended to deceive the PTO by submitting false declarations in connection with the application that led to the ‘974 patent in which they claimed to be the original and first

alleged material omission. See *Gambro Lundia*, 110 F.3d at 1582.

inventors of the claimed subject matter. Moreover, a material issue of fact persists in whether intent to deceive the PTO is “the single most reasonable inference able to be drawn from the evidence to meet the clear and convincing standard. *Star Sci.*, 537 F.3d at 1366.

B. Infringement

A patent is infringed when a person “without authority makes, uses or sells any patented invention, within the United States . . . during the term of the patent.” 35 U.S.C. § 271(a). A two-step analysis is employed in making an infringement determination. *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 976 (Fed. Cir. 1995). First, the court must construe the asserted claims to ascertain their meaning and scope. *Id.* Construction of the claims is a question of law subject to de novo review. *See Cybor Corp. v. FAS Techs.*, 138 F.3d 1448, 1454 (Fed. Cir. 1998). The trier of fact must then compare the properly construed claims with the accused infringing product. *Markman*, 52 F.3d at 976. This second step is a question of fact. *See Bai v. L & L Wings, Inc.*, 160 F.3d 1350, 1353 (Fed. Cir. 1998).

“Direct infringement requires a party to perform each and every step or element of a claimed method or product.” *BMC Res., Inc. v. Paymentech, L.P.*, 498 F.3d 1373, 1378 (Fed. Cir. 2007). “If any claim limitation is absent from the accused device, there is no literal infringement as a matter of law.” *Bayer AG v. Elan Pharm. Research Corp.*, 212 F.3d 1241, 1247 (Fed. Cir. 2000). If an accused product does not infringe an independent claim, it also does not infringe any claim depending thereon. *See Wahpeton Canvas Co. v. Frontier, Inc.*, 870 F.2d 1546, 1553 (Fed. Cir. 1989). A

product that does not literally infringe a patent claim may still infringe under the doctrine of equivalents if the differences between an individual element of the claimed invention and an element of the accused product are insubstantial. *Warner-Jenkinson Co. v. Hilton Davis Chem. Co.*, 520 U.S. 17, 24 (U.S. 1997). The patent owner has the burden of proving infringement and must meet its burden by a preponderance of the evidence. *SmithKline Diagnostics, Inc. v. Helena Lab. Corp.*, 859 F.2d 878, 889 (Fed. Cir. 1988) (citations omitted).

1. The '974 patent

Bosch has asserted that the Accused Pylon Products literally infringe claims 1, 2 and 8 of the '974 patent. The parties have filed cross-motions regarding infringement. (D.I. 169; D.I. 177) The court notes at the outset that a majority of Pylon's proposed constructions for the '974 patent were rejected during claim construction. Insofar as Pylon relies upon these rejected constructions, Pylon cannot prevail on its motion for summary judgment of noninfringement of the '974 patent. Accordingly, the relevant inquiry is whether Bosch LLC has carried its burden with respect to its cross-motion seeking summary judgement of infringement of the '974 patent.

a. "[A] curved, band-shaped, spring elastic support element which distributes a pressure applied by a wiper arm and has a concave and a convex surface which defines corresponding planes

Pylon admits that the Accused Pylon Products include a curved, band-shaped, spring elastic support element which distributes the pressure applied by the wiper arm and has a concave and a convex surface which defines corresponding planes. (D.I. 175, ex. 16 at 20-21)

b. “[A]n elongated rubber-elastic wiper strip placeable on a window to be wiped and mounted to said concave surface of said support element which faces the window, substantially longitudinally parallel to said concave surface”

The Accused Pylon Products include a wiper strip that is positioned on a window and mounted to the concave surface of the support element that faces the window. (*Id.* at 22-23) Pylon further admits that each also has an elongated rubber-elastic wiper strip placeable on a window to be wiped which faces the window, substantially longitudinally parallel to the concave surface of the support element. (*Id.*)

By its order of the same date, the court has construed “mounted to” to mean “secured to.” Buechele testified that “[the Accused Pylon Products] include[] a wiper strip that is secured to a concave surface of a support element.” (D.I. 175, ex. 3 at 296:11-15) Irrespective of this admission, Pylon asserts that a threshold question exists with respect to both the meaning of the term “secured to,” as well as the propriety of its application to the Accused Pylon Products. Pylon alleges that the manner in which the wiper strip connects to the support element varies according to generation. Buechele testified that the Generation 1 wiper strip is linearly insertable into and out of a narrow space created by the two support elements and is “movable” but for the end caps, which hold the wiper strip in position. (D.I. 201, ex. 1 at 6-8) Buechele further describes the contact between the support element as a “mere touching” of the concave and convex surfaces by the wiper element. (*Id.*) Buechele applies similar reasoning and opines that because the wiper elements of Generation 2 and 3 are also movable, they are not “secured to” the support element within the meaning of the ‘974 patent. (*Id.*) Rather, Buechele concludes that the wiper blade is “merely on” the concave surface of the

support element. (*Id.*)

Pylon seeks to unreasonably limit the meaning of “secured to.” The prosecution history suggests simply that the wiper strip must be separate from the support element and “not merely on” it. (D.I. 162, ex. 2 at JA197) Requiring an “immovable” connection between the two elements would impermissibly limit the invention of the ‘974 patent to one preferred embodiment disclosed in Figure 3, as well as render superfluous dependent claim 3, which claims a “solidly joined” connection, and claim 5, which claims a “glued” connection. Even assuming that “secured to” contemplates a connection in which no movement is permitted in relation to the two objects, the court disagrees that the wiper blade is “merely on,” or even movable with respect to, the support element once the end caps are in place. It would be improper to consider the relationship of these two elements divorced from the functionality of the end caps. Accordingly, “secured to” properly encompasses a wiper strip linearly inserted into the support element and held in place by two end caps.

c. “[A] connection device provided for a wiper arm and arranged directly on a convex side of said support element”

Pylon admits that the Accused Pylon Products have a connection device provided for a wiper arm and arranged directly on the convex side of the support element. (D.I. 175, ex. 16 at 24-25)

d. “[A]nd a component which is separate from said wiper strip and is mounted directly to the convex surface of said support element so as to form a leading-edge face extending in a longitudinal direction of the support element and forming, as seen crosswise to its longitudinal extension, an acute angle with a plane which extends parallel to a plane formed by said convex surface”

All of the asserted claims of the '974 patent are directed to a wiper blade that comprises a "component." By its order of the same date, the court has construed "component" to mean "a single- or multiple-part structure having a cross-section in the shape of a triangle or wedge." Buechele acknowledges that the "component" of the '974 patent is a spoiler. (D.I. 175, ex. 3 at 253:6-10) He conceded at his deposition that the Accused Pylon Products each have a spoiler that is "generally triangular." (*Id.* at 296:19-21, 297:7-10) Accordingly, the Accused Pylon Products meet the "component" limitation.

Claims 1, 2 and 8 further require that the "component" be "mounted directly to the convex surface of [the] support element." The court has construed "mounted directly to" to mean "secured directly to." Frauman alleges that the components of the Accused Pylon Products contain claws that permit the component to be slidingly installed on and removed from the support element. (D.I. 181 at ¶ 6) According to Frauman, the end caps prevent the component from sliding off of the wiper blade. (*Id.*) Because the component is not permanently joined to the support element, Frauman opines that the Accused Pylon Products cannot meet this limitation. Consistent with this theory, Pylon submits that, if the bottom part of the groove were removed, the component would simply fall off. Retracting slightly from its position that only a permanent joinder can meet this limitation, Pylon argues alternatively that the "tongue-in-groove" construction present in the Accused Pylon Products does not allow the component to become directly secured to the wiper blade. Specifically, Pylon disputes that the "secured directly to" limitation can be met by the sliding engagement between the component and the wiper blade.

Pylon's allegations regarding the interaction between the component and the support element contemplate a separation of the two elements if the wiper blade is either disassembled (by removing the end caps) or broken (by disrupting the "tongue-in-groove" configuration). In this sense, Pylon is simply rearguing its position during claim construction that "mounted directly to" means "immovably secured to by gluing." And for the same reasons noted *supra* regarding "secured to," the court is not convinced by Pylon's allegations of ambiguity regarding the threshold of connectivity that must exist between two objects before one object may be properly described as "secured directly to" the other. No reasonable jury could conclude that one object is not "secured directly to" another if one must be disassembled or destroyed to separate the two.

Finally, Pylon does not dispute that the spoiler of the Accused Pylon Products includes a leading-edge face that faces into the wind and extends in a longitudinal direction of the support element. Nor does Pylon dispute that the leading-edge face forms an acute angle with a plane that extends parallel to a plane formed by the convex surface of the support element. (*Id.*, ex. 15 at 12-14)

e. "A wiper blade as defined in claim 1, wherein said leading-edge face is disposed on a face of said support element which faces away from the window"

The court was unable to glean the meaning of the additional limitation contained in dependent claim 2 and, accordingly, did not construe it. Consequently, summary judgment of infringement is denied with respect to this claim.

f. "A wiper blade as defined in claim 1, wherein said leading-edge face extends at least nearly over an entire length of the wiper blade."

Pylon does not dispute that, in each of the Accused Pylon Products, the leading-edge face extends at least nearly over the entire length of the wiper blade. (*Id.* at 14; ex. 17 at 4-5; ex. 30 at 1-3)

In sum, Pylon has failed to demonstrate existence of an issue of material fact with respect to infringement of claims 1 and 8 of the '974 patent. The Accused Pylon Products meet each limitation of these claims, and no reasonable juror could find otherwise. Accordingly, the court grants summary judgment that the Accused Pylon Products infringe claims 1 and 8 of the '974 patent.

2. The '434 patent

Bosch has asserted that all of the Accused Pylon Products literally infringe claim 1 and dependent claim 13 of the '434 patent, and that certain of the Accused Pylon Products literally infringe dependent claims 4, 5, 7 and 8. Because the court has rejected most of Pylon's proposed constructions for the disputed claim limitations of the '434 patent, Pylon cannot prevail in its motion for summary judgment of noninfringement of the '434 patent. The court briefly illustrates several issues of material fact in this regard.

a. "[B]racing itself on the wiper blade"

Claim 1 of the '434 patent claims a wiper blade comprising an end cap located on the support element and "bracing itself on the wiper blade." The court has construed this limitation to mean that the end cap is "supporting itself on both the support element and wiper strip." With respect to this limitation, Pylon asserts that "there is no dispute that none of the Accused Pylon Products have end caps that simultaneously brace

themselves on the support element and the wiper strip.” (D.I. 179 at 14) The court has rejected the notion that any such bracing by the end cap must be simultaneous; Pylon has failed to demonstrate that the Accused Pylon Products do not meet this limitation as a matter of law.

b. “[D]etent shoulder”

All of the asserted claims of the ‘434 patent recite a “detent shoulder,” which the court has construed to mean “part of a structure [support element or base body] that secures structure to another.” A reasonable jury could determine that this construction is broad enough to encompass the Accused Pylon Products, which engage and secure end caps through holes (Generation 1) or cut-outs (Generations 2 and 3) into the interior of the support element.

Pylon disputes that this limitation is met to the extent that the Accused Pylon Products “are merely practicing the prior art for end caps” (*Id.*) Pylon cites several patents¹¹ that allegedly demonstrate a nearly identical wiper blade/end cap configuration. Dubowsky has opined that material differences exist between the invention of the ‘434 patent and Pylon’s asserted patents. Irrespective of competing expert testimony in this regard, the Federal Circuit has made “unequivocally clear . . . that there is no ‘practicing the prior art’ defense to literal infringement.” *Tate Access Floors v. Interface Architectural Res.*, 279 F.3d 1357, 1365 (Fed. Cir. 2002) (citing *Baxter Healthcare Corp. v. Spectramed, Inc.*, 49 F.3d 1575, 1583 (Fed. Cir. 1995)).

¹¹The patents cited by Pylon include U.S. Patent Nos. 3,626,544, 5,493,750 and 3,785,002. The PTO considered each of these patents during examination of the ‘434 patent.

Indeed, “[l]iteral infringement exists if each of the limitations of the asserted claim(s) read on, that is, are found in, the accused device. Questions of obviousness in light of the prior art go to validity of the claims, not to whether an accused device infringes.” *Id.* at 1366.

On this record, the court cannot say that the Accused Pylon Products do not infringe the ‘434 patent as a matter of law. For the forgoing reasons, the court denies Pylon’s motion for summary judgment of noninfringement with respect to the ‘434 patent.

3. The ‘905 patent

Bosch has asserted that the Accused Pylon Products infringe claim 13 of the ‘905 patent literally or under the doctrine of equivalents. Claim 13 requires that “a section of the wind deflection strip” be “disposed between and in contact with” the end caps and device piece. The Accused Pylon Products each have a device piece that connects the wiper blade to the wiper arm. The parties’ dispute centers upon whether the plastic beauty cover that encloses the device piece interrupts whatever degree of continuity is required. It is Pylon’s position that the plastic beauty cover plays no role in connecting the wiper blade to a wiper arm. Dubowsky’s expert report comes to a contrary conclusion. (D.I. 198, ex. 60 at 25-28) Specifically, Dubowsky opines that the characterization of the beauty cover as a necessary extension of the device piece follows logically from its role in preventing vibration, as well as the accumulation of ice and snow in the device piece. Moreover, Dubowsky contends that, to the extent that the Accused Pylon Products contain a gap between the wind deflection strip and the device piece, any such gap is functionally insignificant. (*Id.*)

Pylon also argues that Bosch LLC is precluded from asserting infringement under

the doctrine of equivalents because the applicants of the '905 patent narrowed claim 13 during prosecution. (D.I. 179 at 21) In this regard, Pylon alleges that the applicants added the "in contact with" limitation to overcome prior art and, accordingly, surrendered all subject matter between the broader and narrower language. *See Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 535 U.S. 722, 727 (U.S. 2002). A thorough review of the prosecution history, however, reveals that the amendment adding the "in contact with" limitation was not made to overcome prior art, nor was it made as a prerequisite to patentability.¹² Consequently, the court will not entertain a presumption that, through this amendment, the applicants of the '434 patent have disclaimed subject matter. *See VDP Patent, LLC v. Welch Allyn Holdings, Inc.*, 623 F. Supp. 2d 364, 376 (S.D.N.Y. 2007).

At a minimum, issues of material fact exist with respect to the function of the beauty cover, as well as to whether or not it reads upon the aforementioned limitations of claim 13. Pylon's motion for summary judgment of noninfringement with respect to the '905 patent is denied.

4. The '512 patent

The Accused Pylon Products stand accused of infringing claims 1, 3, 8, 9 and 13 of the '512 patent. The '512 patent claims a beam blade characterized by a support element consisting of two band-like spring strips that are connected by at least two

¹²Indeed, the PTO twice allowed the original application claim that ultimately issued as claim 13 before the phrase "and in contact with" was added via examiner's amendment. (D.I. 164, ex. 6 at JA754, JA759, JA804-05) According to the examiner's amendment, the wind deflection strip was "set forth as in contact with the end cap and device piece to clarify the relationship of the end cap, deflective strip and device piece. (*Id.* at JA895)

welded crosspieces. Pursuant to the court's claim construction order, the limitation of claim 1 "wherein each crosspiece disposed at the end sections of the two spring strips" means that the "crosspieces must be located at the terminal portions of the spring strips."¹³ Bosch LLC does not dispute that the Accused Pylon Products do not have crosspieces on the ends of the spring strips. Accordingly, the Accused Pylon Products cannot meet this limitation of claim 1 as a matter of law. Because the remaining asserted claims of the '512 patent depend upon claim 1, Pylon's motion for summary judgment of noninfringement of the '512 patent is granted. See *Wahpeton*, 870 F.2d at 1553.

6. The '380 patent

Pylon has asserted that Bosch LLC's U3 connector literally infringes¹⁴ claims 1, 2, 9, 10, 23 and 24 of the '380 patent. Claims 1, 23 and 24 are independent claims; claims 2, 9 and 10 depend from claim 1. Because Pylon has failed to demonstrate the

¹³As explained in the court's claim construction order, the only embodiments disclosed by the '512 patent are characterized by crosspieces located at the terminal portions of the spring strips. This construction comports with the prosecution history, in which the examiner rejected the claims of the '512 patent in view of a prior art wiper blade which contained crosspieces located at the ends of the spring strips. The applicant did not traverse this rejection by noting that the crosspieces of the '512 patent could be located elsewhere. (D.I. 165 at JA01077)

¹⁴Pylon has also advanced the theory that the limitation "rearward of said pin passage and said rivet passage" is met by the U3 connector under a doctrine of equivalents analysis. The court is mindful of Bosch LLC's motion to strike the source of this theory, to wit, the supplemental expert report of Buechele. As explained in detail *infra*, because Pylon has failed to demonstrate a material issue of fact with respect to the presence of an additional limitation of the '380 patent, a doctrine of equivalents analysis will not prevent the grant of Bosch LLC's motion for summary judgment of noninfringement. Accordingly, the court denies the motion to strike as moot.

existence of a material issue of fact with respect to the presence of a “pin passage”¹⁵ in the U3 connector, the court grants Bosch’s motion for summary judgment of noninfringement of the ‘380 patent.

i. “[P]in passage”

The term “pin passage” is recited by independent claims 1, 23 and 24 of the ‘380 patent. The court has construed this limitation to mean “a passage adapted to couple the connector to a wiper arm pin without requiring the use of an adapter.” Pylon alleges that the existence of a genuine issue of material fact with respect to whether the U3 connector uses an “adapter” precludes the grant of summary judgment of noninfringement. Specifically, Pylon argues that Bosch LLC has admitted that the U3 connector does not require the use of an adapter to couple to the pin-type wiper arm. In support of this “admission,” Pylon cites to the deposition testimony of Frank Katzenmeier (“Katzenmeier”), Bosch LLC’s corporate representative assigned to the topic of the structure of the Evolution wiper blade. Katzenmeier testified as follows with respect to a Bosch-authored pamphlet regarding the Evolution wiper blade:

- Q. And then it reads: “No adapters required.” Does that sort of speak for itself, that it is basically ready to be attached to a vehicle without the need of **additional** adapters?
- A. I would conclude that, yes.
- * * *
- Q. And there is also a statement that no adapters are required, so in other words, the Bosch Evolution would fit these hooks and pins without the need for an **additional** adapter? . . .
- A. The Bosch Evolution would fit if they have the below listed hook or pin sizes, that’s correct.

¹⁵This limitation is present in each of the asserted claims of the ‘380 patent.

Q. Without an adapter? . . .

A. Without an **additional** adapter.

(D.I. 243, ex. 74 at 162:13-18, 165:14-166:5) (emphasis added) Contrary to Pylon's assertion of a clear admission that the U3 connectors do not require an adapter, all that the court can glean from this deposition is that the Evolution wiper blade does not require an **additional** adapter to couple the wiper blade to the wiper pin arm. This, of course, is irrelevant to a comparison of the U3 connector to the construed claims of the '380 patent.

Moreover, Pylon acknowledges that coupling requires placing the pin-type wiper arm into the semicircular passage of the U3 connector and "engaging the pin with a locking device that folds down on the connector." (D.I. 202 at 5) Pylon's "locking device" is part of the structure of the Evolution wiper blade and not the U3 connector itself. Accordingly, the parties do not seriously dispute that this "locking device" is required to couple the U3 connector to a pin-type arm. The opinion of Pylon's expert comports with this understanding; indeed, Buechele opined that an "adapter is needed so that the pin can be coupled to the wiper blade," the adapter "is not part of the U3 connector," and the semi-circular cut-out "does not couple the U3 connector to a pin-type [wiper] arm." (D.I. 175, ex. 3 at 186:13-25, 187:12-24) Pylon's characterization of this external mechanism (separate from the U3 connector and required to couple the U3 connector to a pin-type arm) as a "locking device" rather than an "adapter" cannot elicit a material issue of fact where none exists. The U3 connector does not contain the "pin passage" limitation of the '380 patent as a matter of law. In light of the forgoing, the

court grants Bosch LLC's motion for summary judgment of noninfringement of the '380 patent.

V. CONCLUSION

For the foregoing reasons, the court: (1) grants Bosch LLC's motion for summary judgment of infringement of the '974 patent (D.I. 169) with respect to claims 1 and 8 and denies it with respect to claim 2; (2) grants Bosch LLC's motion for summary judgment of noninfringement of the '380 patent (D.I. 171); (3) grants Bosch LLC's motion for summary judgment of no inequitable conduct and no invalidity for derivation (D.I. 173) with respect to the '905 and '434 patents and denies it with respect to the '974 patent; (4) grants Pylon's motion for summary judgment of noninfringement of the '512 patent (D.I. 177); (5) denies Pylon's motion for summary judgment of noninfringement of the '974, '905 and '434 patents (*Id.*); (6) denies Pylon's motion for summary judgment that the '974 and '512 patents are invalid as anticipated or obvious (D.I. 177); and (7) denies as moot Bosch LLC's motion to strike the expert report of Franz Buechele (D.I. 191). An appropriate order shall issue.